

FIG. 3D

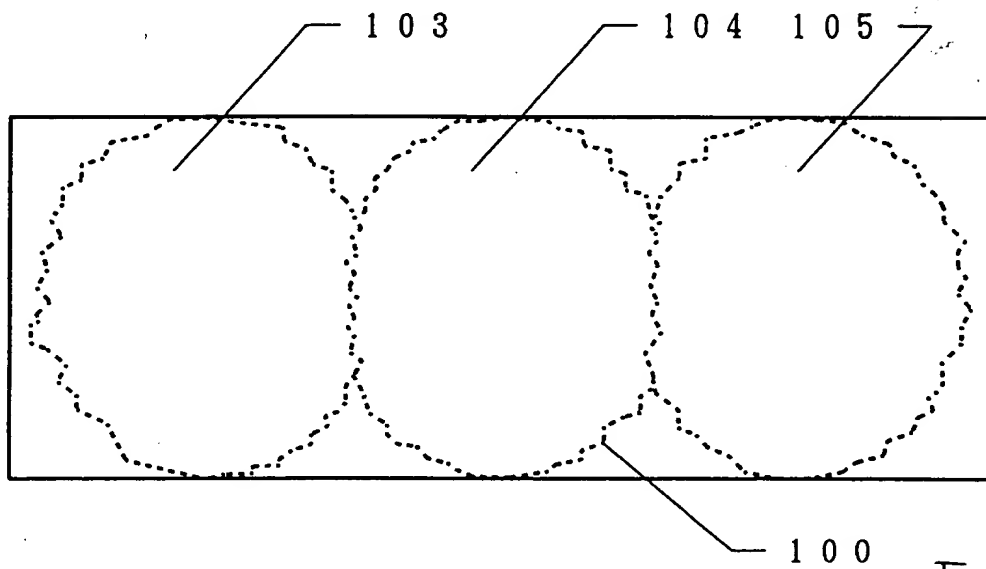


FIG. 4A

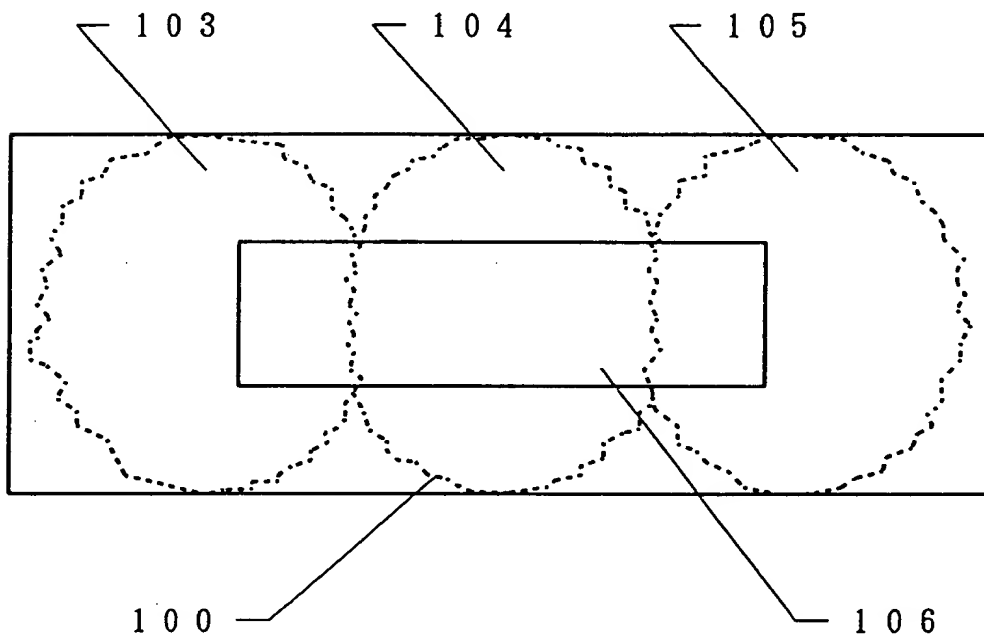


FIG. 4B

	SINGLE CRYSTALLINE SILICON TFT	MONODOMAIN TFT
GRAIN BOUNDARY	NO	NO
CONCENTRATION OF HYDROGEN (cm^{-3})	detection limit	$1 \times 10^{15} - 1 \times 10^{20}$
ESR (cm^{-3})	detection limit	$1 \times 10^{15} - 1 \times 10^{17}$
CRYSTALLINITY	YES	YES
MOBILITY (Vs/cm^2)	P-channel:300-500 N-channel:800-1200	P-channel:200-400 N-channel:500-1000
S VALUE	0.01 - 0.1	0.03 - 0.3
FORM	formed into single crystalline silicon wafer	semiconductor thin film formed on insulating substrate such as glass (strain point of 550- 750 °C) is used.
PROCESS TEMPERATURE (°C)	800-1100, typically 900-1000	450-700 typically 500-650

FIG. 5

	P-Si (poly-silicon) TFT	a-Si (amorphous silicon) TFT
GRAIN BOUNDARY	YES	NO
CONCENTRATION OF HYDROGEN (cm ⁻³)	$5 \times 10^{19} - 5 \times 10^{20}$	$1 \times 10^{20} - 5 \times 10^{21}$
ESR (cm ⁻³)	$1 \times 10^{17} - 1 \times 10^{18}$	$1 \times 10^{18} - 1 \times 10^{19}$
CRYSTALLINITY	YES	NO
MOBILITY (Vs/cm ²)	P-channel:50-100 N-channel:100-200	P-channel:0.01-0.5 N-channel:0.5-2
S VALUE	0.1 - 0.5	0.3 - 0.7
FORM	semiconductor thin film formed on insulating substrate such as glass is used.	semiconductor thin film formed on insulating substrate such as glass is used.
PROCESS TEMPERATURE (°C)	300-600, typically 500-580	200-400 typically 300-350

FIG. 6



FIG. 7

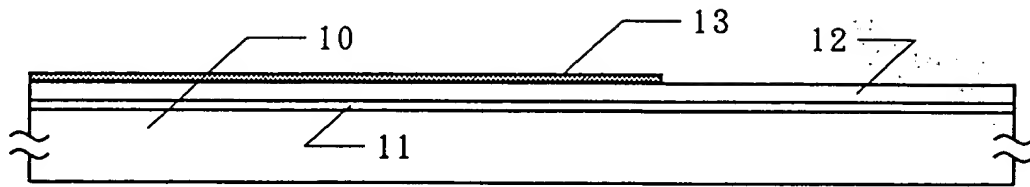


FIG. 8A

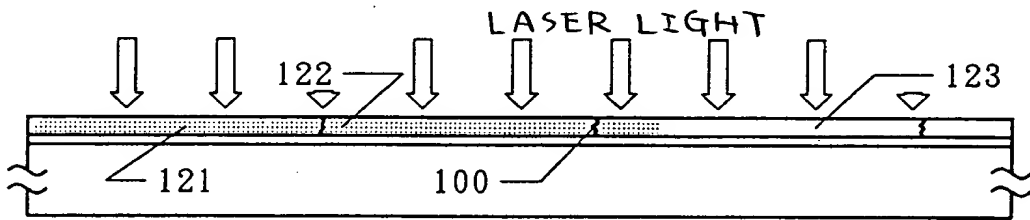


FIG. 8B

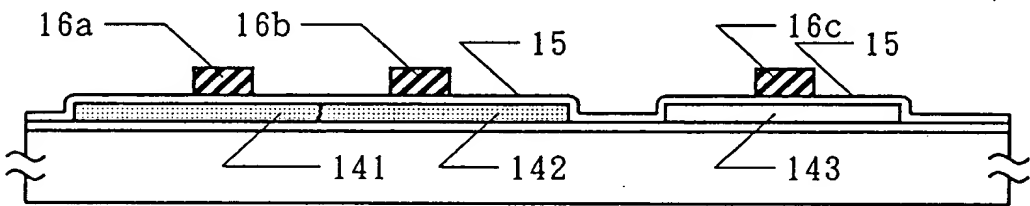


FIG. 8C

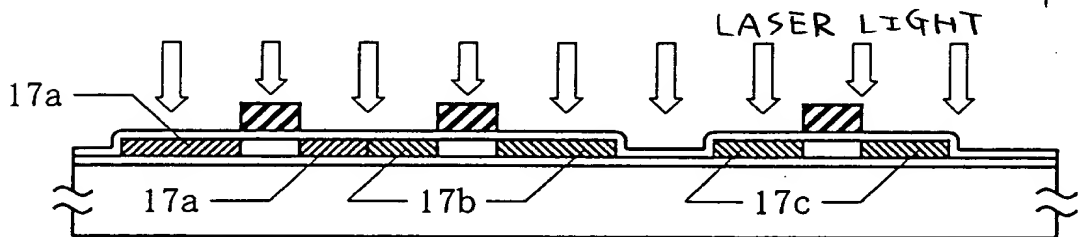


FIG. 8D

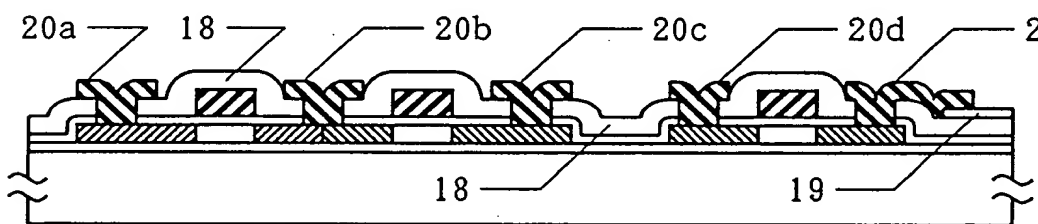
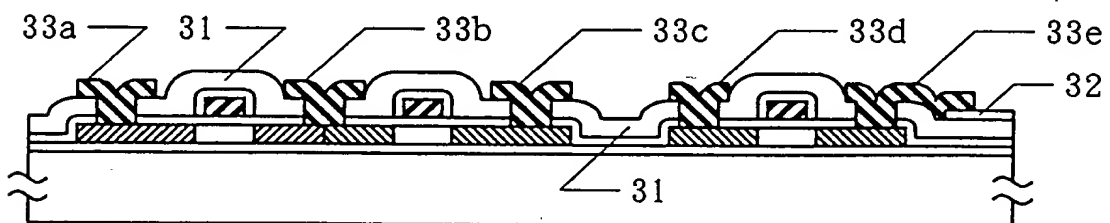
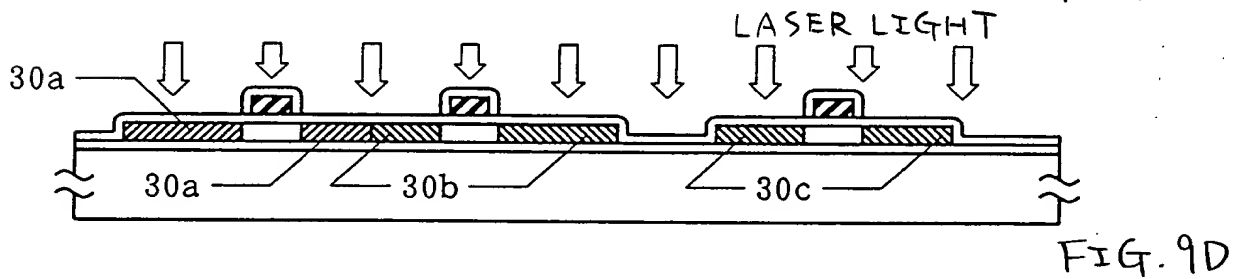
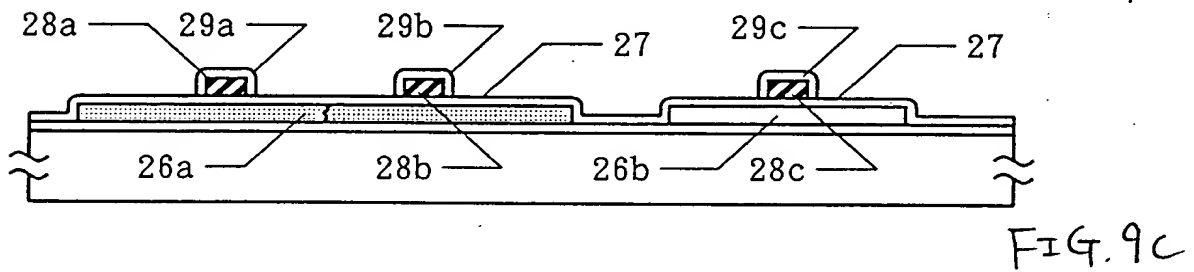
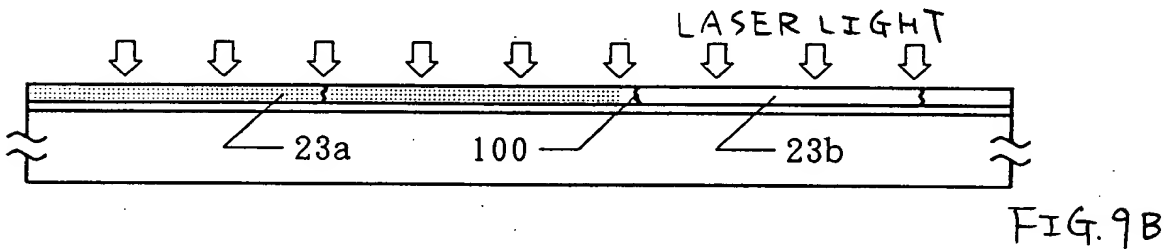
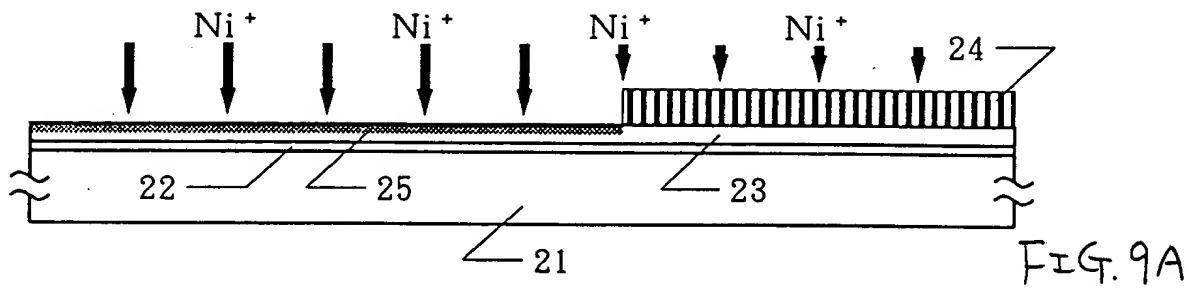


FIG. 8E



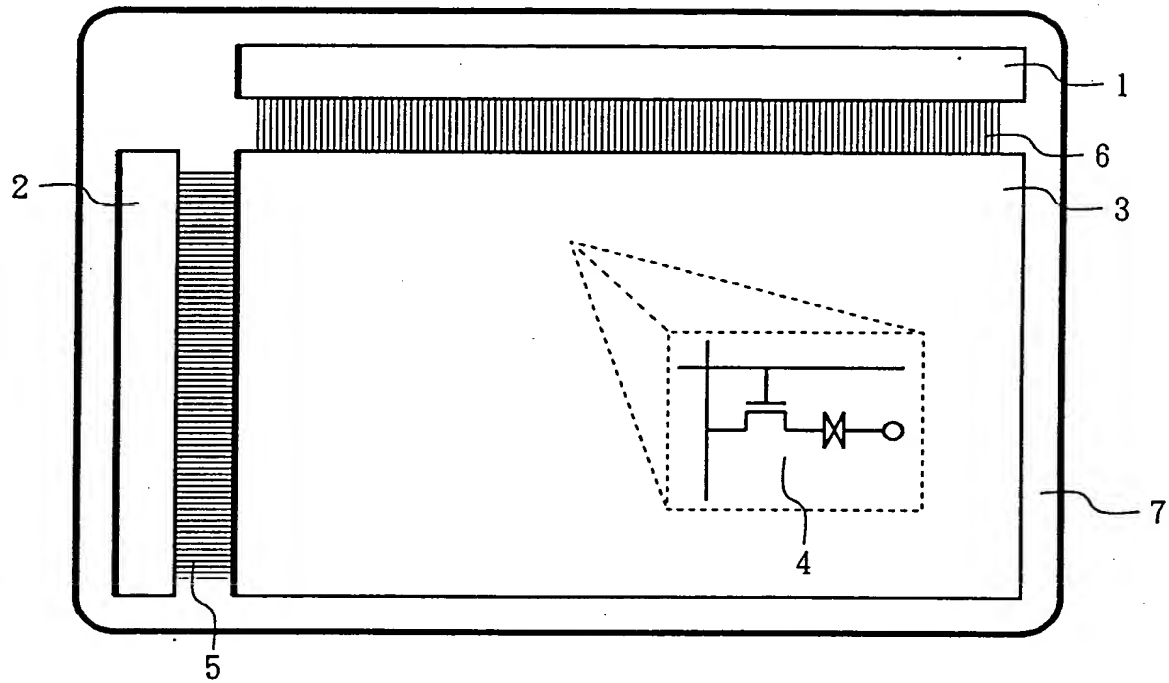


FIG. 10

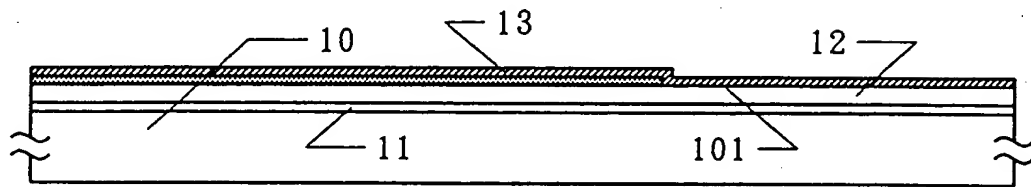


FIG. 11A

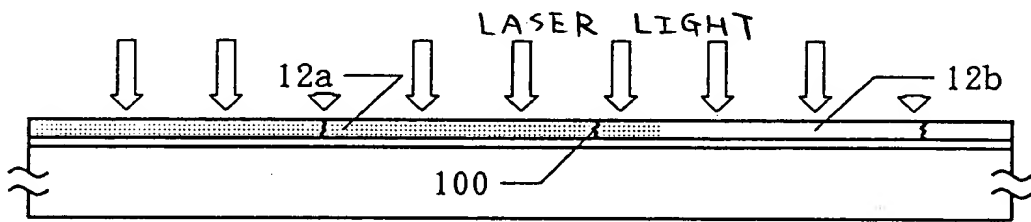


FIG. 11B

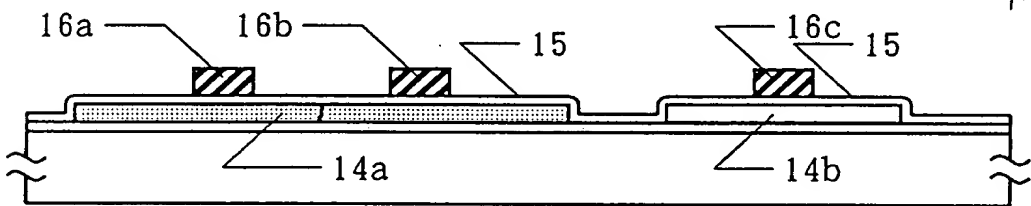


FIG. 11C

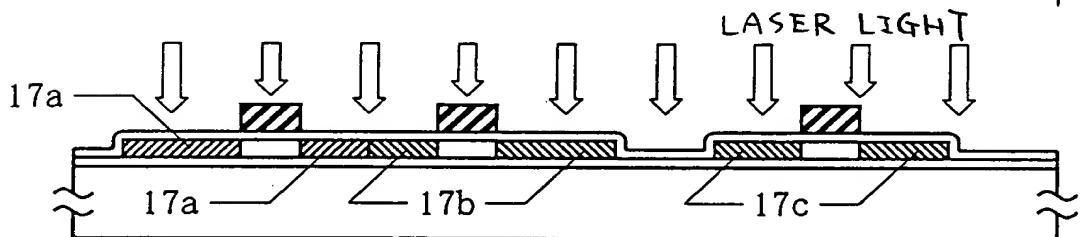


FIG. 11D

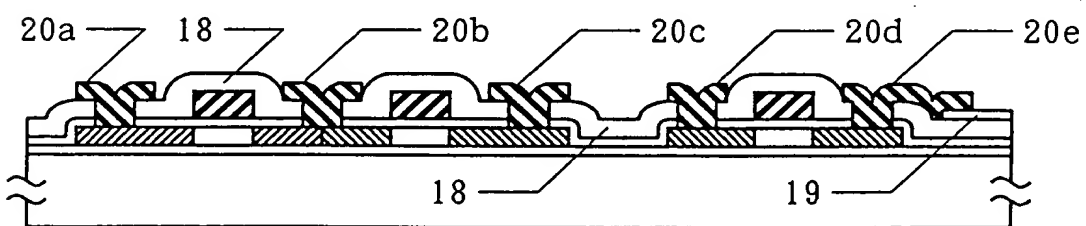
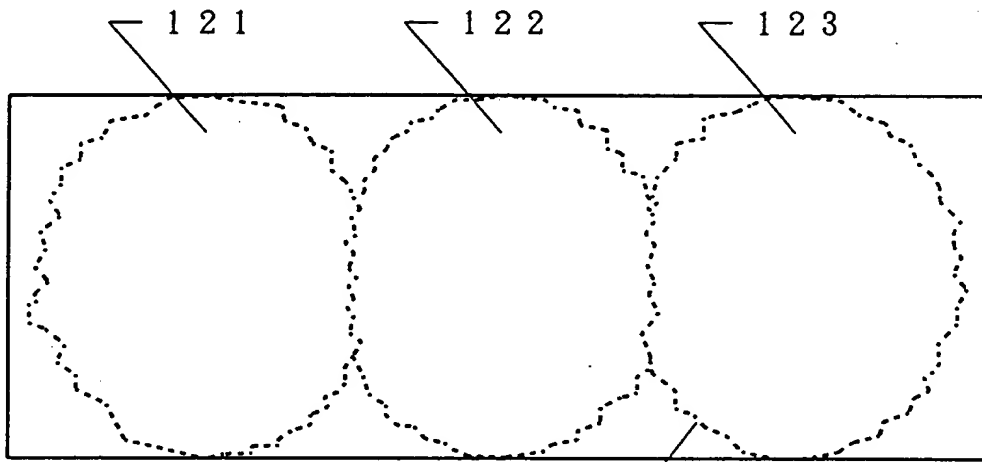
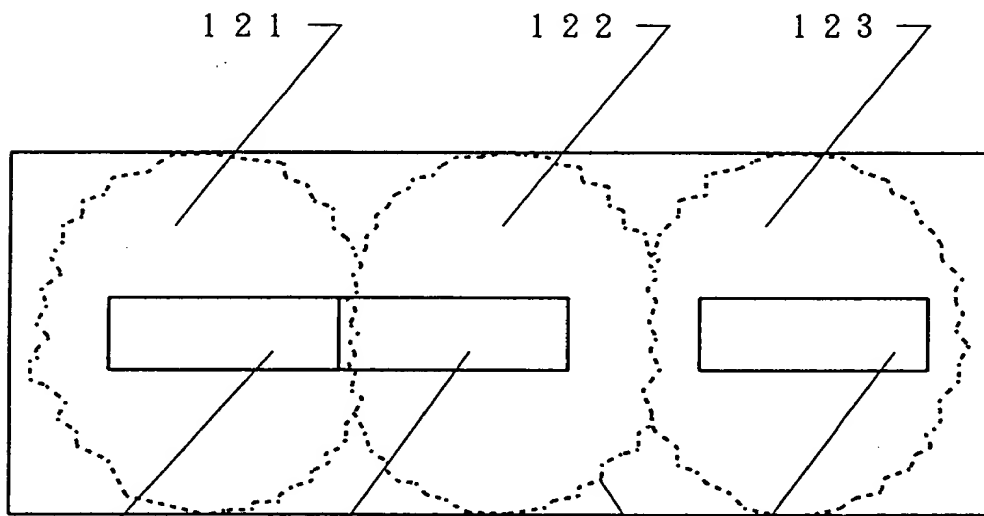


FIG. 11E



100

FIG. 12A



141

142

143

100

FIG. 12B

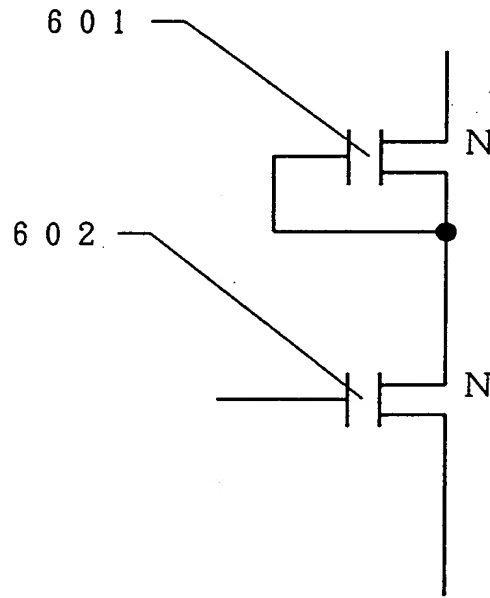


FIG. 13A

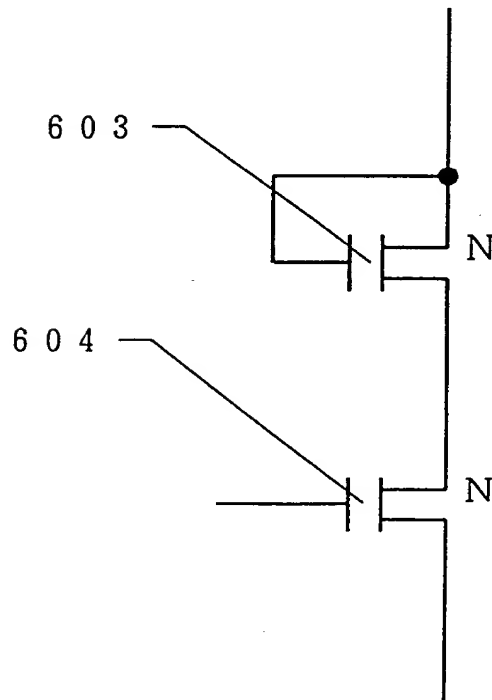


FIG. 13B